SANTEC
VIDEO TECHNOLOGIES

USER MANUAL

IP day/night PTZ camera in weather-proof housing

Model
SNC-670ID/W

Version 1.1$_{n\text{-}f}$/0910/engl/A6

Dear customer,

Thank you for purchasing a high quality SANTEC device.

We recommend that you read this manual thoroughly before operating your new system for the first time. Please follow all instructions and observe the warnings contained in this manual.

Please contact your local dealer or use the SANTEC Service Hotline if you have any questions or if you wish to claim for a service or warranty.

You will find further information on our website:
www.santec-video.com

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(if available from your country)

support@santec-video.com

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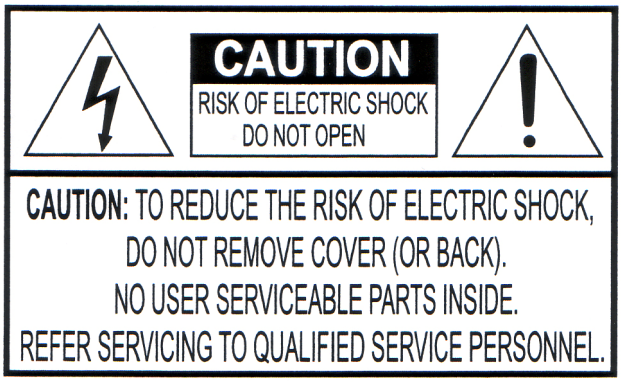
Safety precautions

Caution


CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK).
NO USER SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

Description of symbols

Danger: This symbol is intended to alert the user to the presence of un-insulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to a person.

Warning: This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

CE compliance

Attention: Any changes or modifications to this appliance which have not been explicitly approved of by the respective regulatory authority, may lead to a prohibition of usage of this appliance.

This appliance complies with the CE guidelines.

Safety instructions

- Before operating the appliance, please read this manual carefully and retain it for further reference.
- Before cleaning the appliance, it has to be switched off and unplugged from the power outlet. Wipe the appliance with a soft damp cloth.
  Do not use harsh cleansers or aerosols for cleaning. The type label may not be replaced.
- Do not use attachments unless recommended by the manufacturer as they may affect the functionality of the appliance and result in the risk of fire, electric shock or injury.
- Never install the appliance in areas exposed to water or other liquids.
- The camera housing complies with class IP-66.
- The appliance has to be installed in a safe and stable location which is able to carry the weight of the appliance. Quick stops, excessive force, and uneven surfaces may cause the appliance to fall causing serious injury to persons and damage to objects.
- Openings in the appliance, if any, are provided for ventilation to ensure reliable operation of the appliance and to protect if from overheating. These openings must not be covered or blocked. Please make sure that the appliance does not overheat.
- The appliance should only be operated from the type of power source indicated on the marking label. If you are not sure of the type of power supplied at the installation location, please contact your local dealer.
- An appliance which is powered through a polarized plug (a plug with one blade wider than the other) will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug into the outlet, try reversing the plug. Do not defeat the safety purpose of the polarized plug.
- If the appliance is powered through a grounding-type plug, the plug will only fit into a grounding-type power outlet. This is a safety feature. If your outlet does not have the grounding plug receptacle, contact your local electrician.
- Route power cords and cables in a manner to protect them from damage by being walked on or pinched by items places upon or against them.
- For protection of the appliance during a lightning storm or when it is left unattended and unused for a longer period, unplug the appliance from the wall outlet. Disconnect any antennas or cable systems that may be connected to the appliance. This will prevent damage to the appliance due to lightning or power-line surges.
- Do not overload wall outlets and extension cords as this can result in a risk of fire or electric shock.
- Never insert items into the openings of the appliance. They may touch parts under electric current which may cause an electric shock.
- Never pour any liquids over the appliance.

- In case of any operating interruption or a complete operating failure please switch off the appliance and disconnect it from the wall outlet. Never attempt to service or repair the appliance yourself, as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

- When replacement parts are required, be sure that the service technician uses replacements parts specified by the manufacturer or that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards.

- Upon completion of any service or repairs to the appliance, ask the service technician to perform safety checks to verify that the appliance is in proper operating condition.

- The appliance should only be installed by qualified service personnel and has to comply with local specifications and regulations.

- Never point the camera at an object with a high degree of luminance. Bright vertical or horizontal lines can result in a distortion (outshine) of the entire image on the monitor. This artifact is not an error but a particularity of semiconductor CCDs when they are directly exposed to a powerful light source.

- At the installation site, the camera has to be adjusted to the given light conditions (see OSD).

- Please respect the local legal regulations on waste if you need to dispose of discarded appliances.

This symbol means that electrical appliances need to be disposed of properly and not simply with unsorted household refuse. Please respect local regulations on waste disposal.

About this user manual

This manual aims at assisting the user on how to operate camera SNC-670ID/W.

This manual is subject to rigid quality control. However, no guarantee can be given that mistakes are not present. We reserve the right to make changes to the manual without prior notice.
Before operating the appliance, please read this manual carefully and retain it for further reference.
Verify that all appliance items are included in the delivery. Should items be missing, do not operate the appliance and contact your local dealer.
Never attempt to repair the appliance yourself. This should only be done by qualified service personnel.
Improper handling of the appliance will invalidate the warranty.

Items included in the delivery

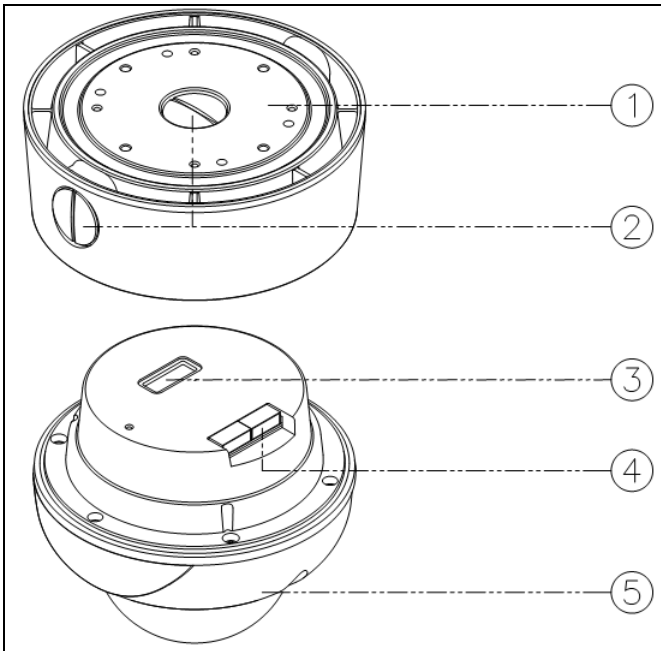
1x camera SNC-670ID/W
1x cable adapter BNC socket
7x screws
2x connection plug
1x SanView-Lite software
1x IP-finder software
1x user manual

1. Installation

(also see the pictures on the following pages)

This camera is a PTZ camera in a vandal-proof housing, class IP-66. You will find the technical data at the end of the manual.

1.1. Camera overview



1. Adapter for mounting plate
2. Screw (PT ½)
3. DIP-switch
4. Distributor
5. Camera module

1.2. Connections

Ethernet connection

Power supply 12 V DC

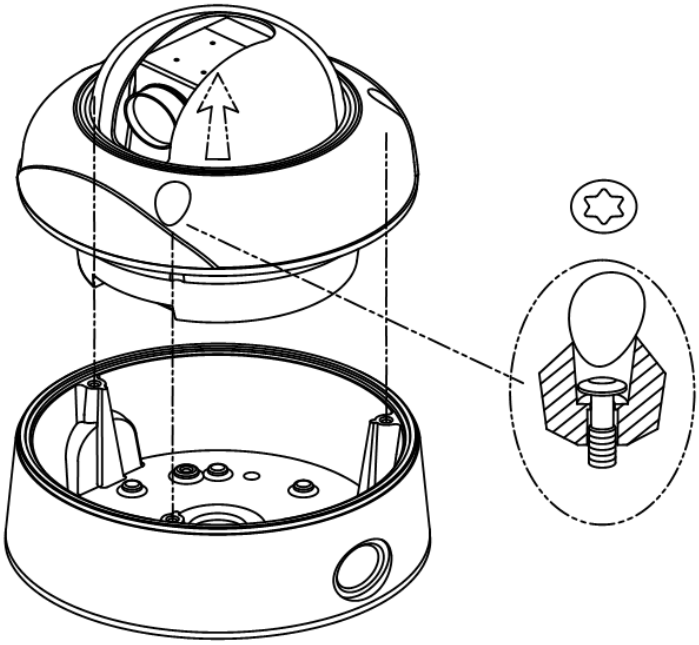
Audio input/output

Alarm input/output

1.3. How to open the housing

Open the housing by carefully loosening the housing's screws. Pull off the housing module from the camera module. Make sure not to damage the rubber gasket.

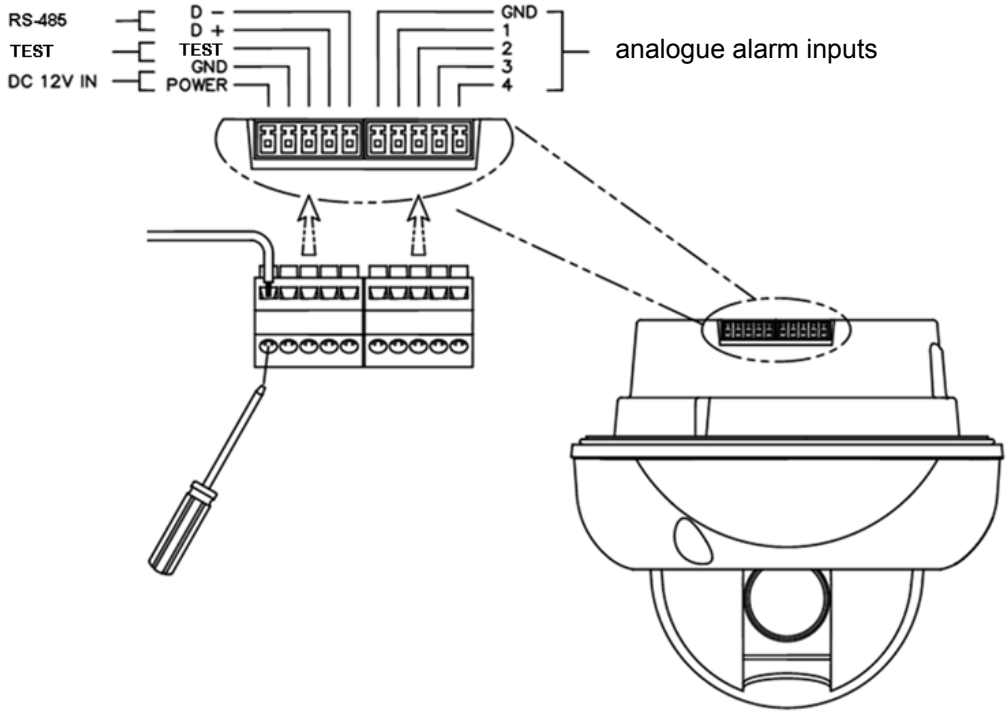
Improper handling of the appliance will invalidate the warranty.



1.4. Connections for power supply and video

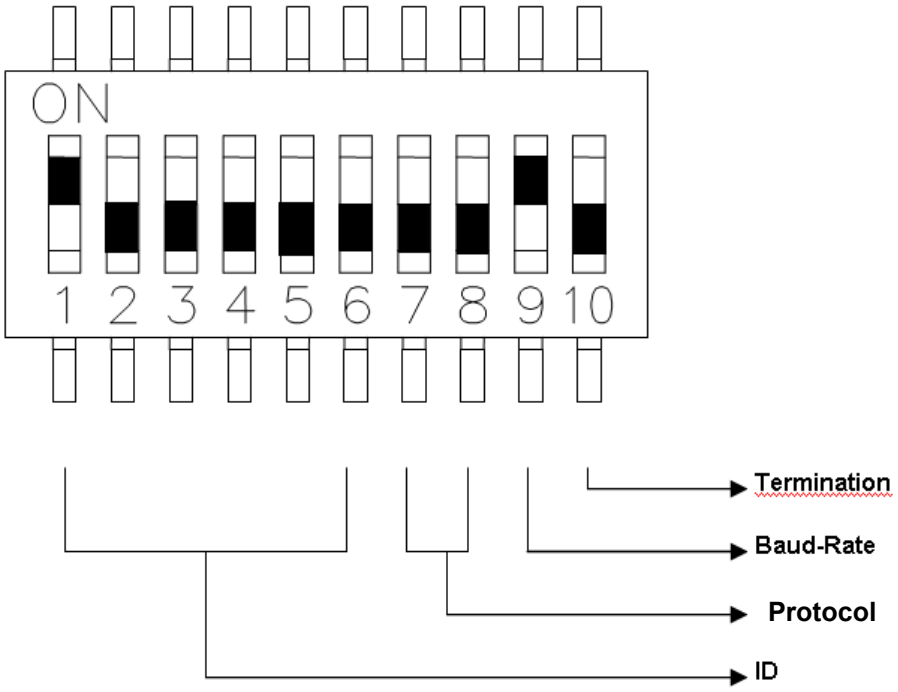
The camera can be powered by 12 V DC using an external power supply unit.
Plug-in the power cable (it is recommended to use 12 V DC, 2 A) to the **Power** interface.

The camera has an analogue video output (BNC). If a monitor is directly connected to the analogue video output of the camera, the monitor impedance has to be set to 75 Ohm. Check the switch in case the video picture is not clear. Plug-in the video cable to the video output (marked **Video**).



1.5. DIP-switch settings

By default, the DIP-switch settings are as follows:



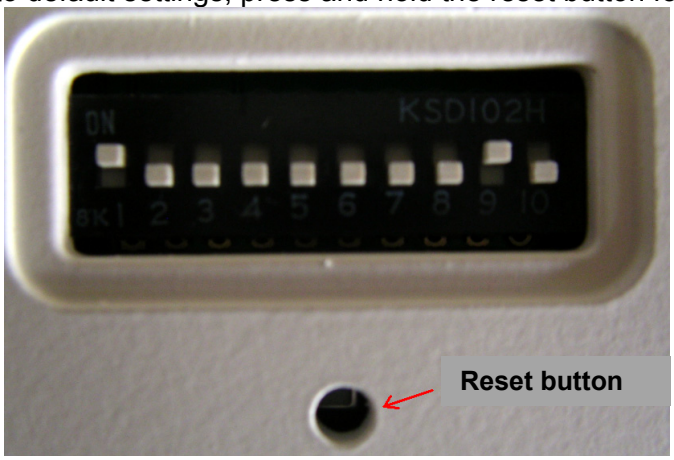
By default, the following settings apply:

- ID: 01
- Baud rate: 9600
- Protocol: Pelco D

These settings of the analogue camera module must not be changed because they are aligned with the RS-485 settings of the IP camera module.

1.6. Reset the camera to default settings

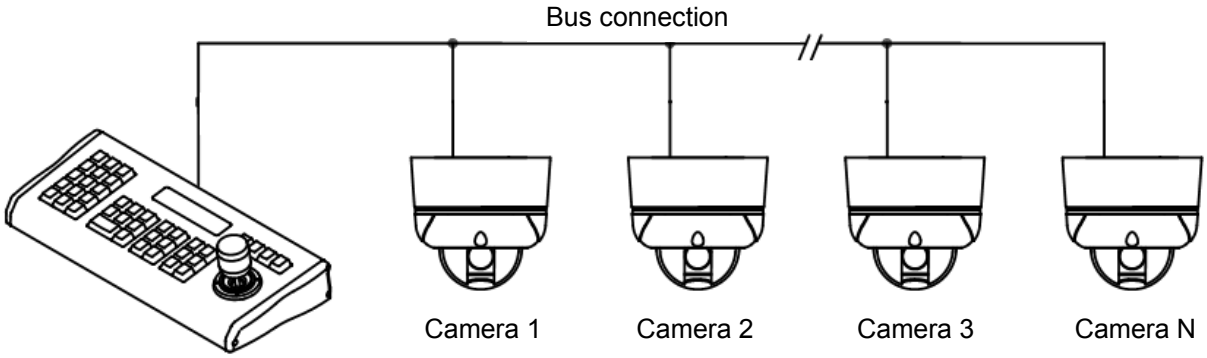
To reset the camera to default settings, press and hold the reset button for 5 seconds.



1.7. External RS-485 connection

PTZ camera control can also be done by the RS-485 interface.

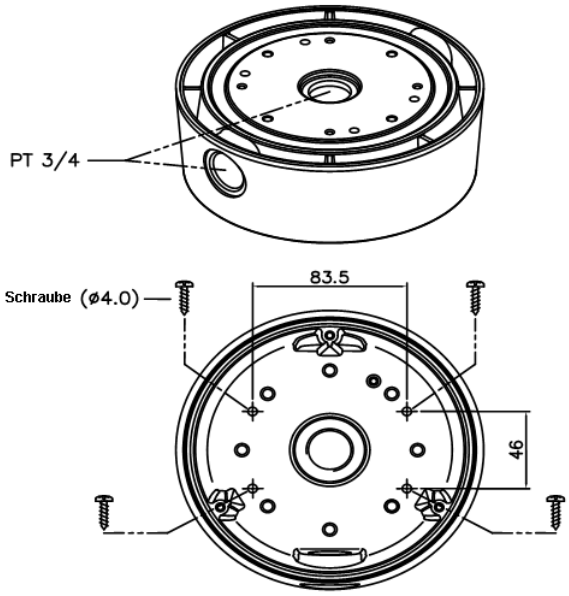
Please note the following: The DIP-switch SM10 is used for 100 Ohm. DIP-switch SW10 must only be used for the last camera at the bus (even if only one camera is used).



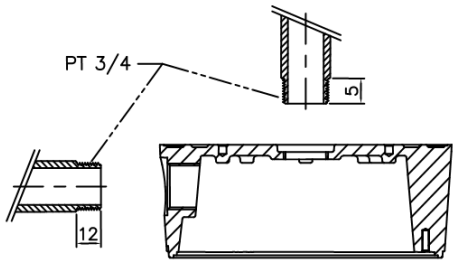
1.8. Camera mounting

Mount the camera onto a solid surface which is capable to carry the weight of the camera. In case the screws included in the delivery are not adequate, please make sure to use other suitable screws to ensure a safe camera installation.

1. Fix the bracket to the desired location using 4 screws.

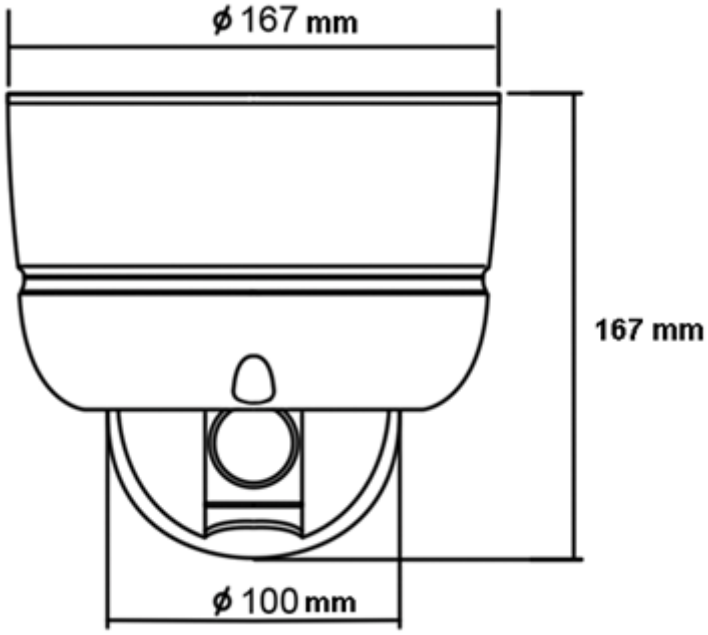


2. If you use a tube cable channel, please make sure to use the right size.



3. Assemble the camera.

1.9. Dimensions



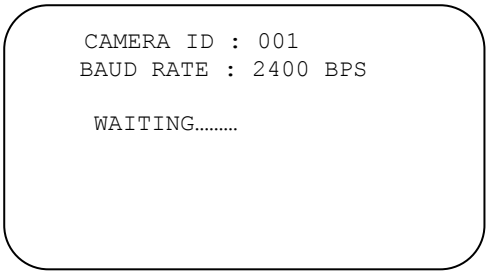
1.10. PTZ control via Pelco D protocol

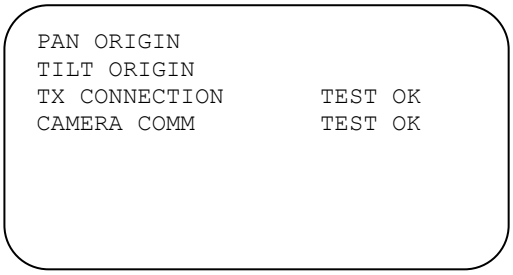
Command	Description	Function
1 - 64, 100-200 +Preset	Presets	Execute preset 1 – 165
65 + Preset	Preset status	Preset status display
66 +Preset	Autoscans	Execute autoscan 1 – 8
67 +Preset	AUTO FLIP function	Select auto flip mode ON / OFF / AUTO
71-78 +Preset	Tours	Execute tour 1 – 8
81-88 +Preset	Patterns	Execute patterns 1 – 8
91 + Preset	Homeposition	Go to home position
92 + Preset	Freeze	Freeze picture
93 + Preset	BLC mode	Select BLC mode ON / OFF
94 + Preset	Day/night mode	Select day/night mode AUTO / DAY / NIGHT
95 + Preset	OSD menu	Open OSD main menu
96 + Preset	Focus setting	Adapt focus
97 +Preset	Alarm	Select alarm mode for all inputs ON / OFF

Navigation in OSD menu	Command / Button
Move cursor up/down	Tilt up (arrow up) / down (arrow down)
Open sub-menu	Pan right (arrow right)
Change status (decrease/increase)	Pan right (arrow right) / pan left (arrow left)
Entry key	Focus near (focus -)
Use function key for coordinates	Focus far (focus +)
Cursors right	Zoom tele (zoom +)
Cursors left	Zoom wide (zoom -)

1.11. Diagnosis

When the camera is switched on, the DIAGNOSIS menu appears. The following notification is displayed:





Pan origin test

After the panning test, the pan function is set to zero.

Tilt origin test

After the tilting test, the tilt function iss et to zero.

TX connection test

60 seconds countdown for TX connection test. The camera has to receive a signal from a controller or a video for a duration of 60 seconds. Once the correct signal is received, the TX connection test says "OK“.

If the notification „Not Tested“ is displayed on the monitor:

- the camera didn’t receive any signal
- the camera hasn’t received a readable signal
- protocol, Baud rate and RS-485 connector should be checked.

Camera communication test

The camera communication test is initialised automatically. Before the installation these 4 tests should be completed with “OK”.

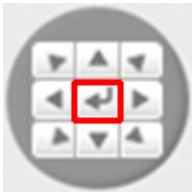
Once all tests are okay, the following notifications appear on the monitor: „NOW EEPROM CHECKING“ and „ALL DATA INITIALIZING“. The camera is now ready to be used.

1.12. Adjustment of analogue camera module

The camera adjustments of the analogue camera module are done by an OSD (on-screen display) menu.

Follow the instructions in chapter „OSD menu“ for more detailed information.

The OSD menu can be displayed by using the web interface of the camera on the page „live view“.

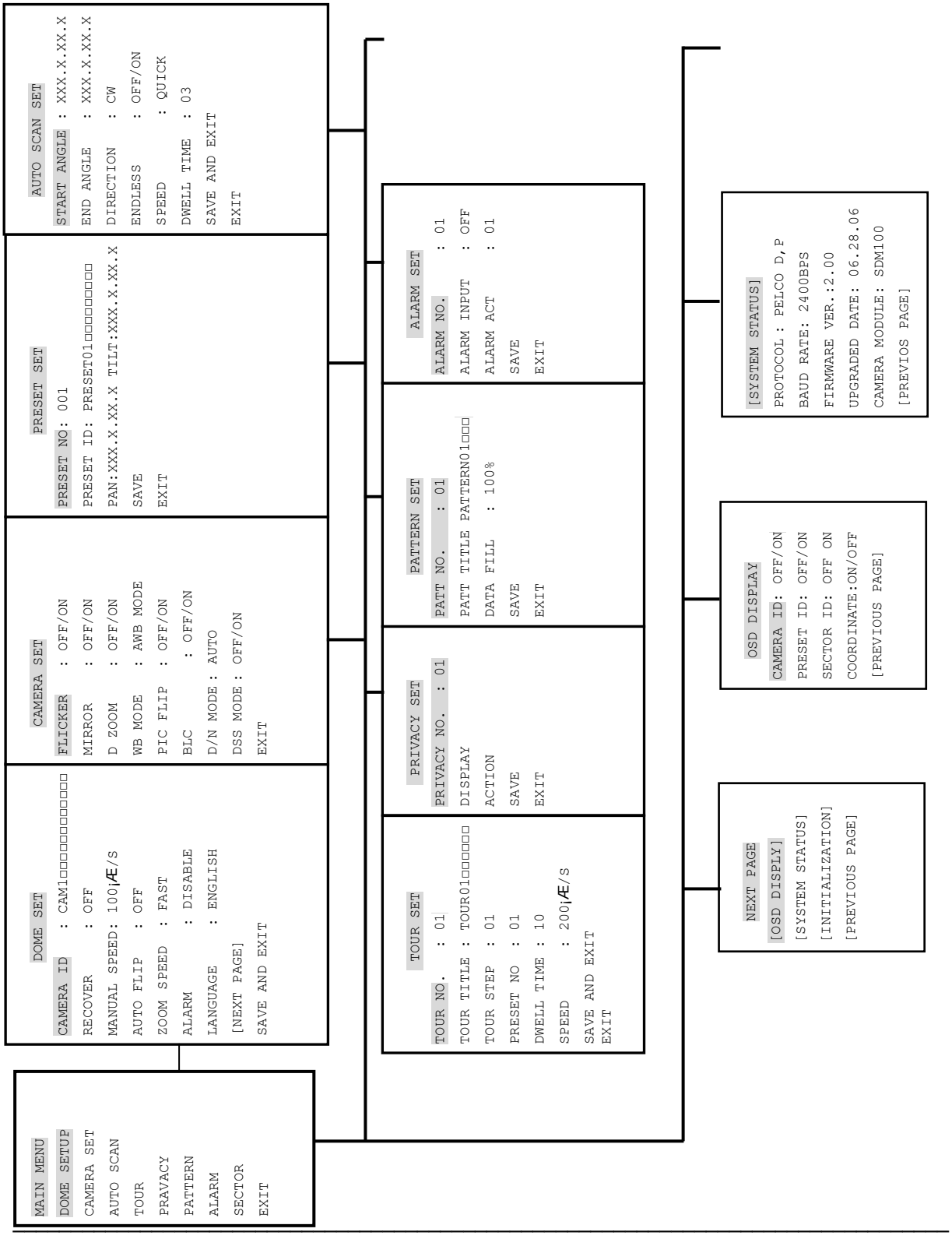


In order to navigate through the OSD menu, please use the **arrow buttons**. To confirm your selection, press the button.
The SanView software also enables access to the camera OSD menu via the network.
To call up the OSD menu, press the **OSD** button on the **PTZ** tab.

In order to navigate through the OSD menu, please use the **arrow buttons**. To confirm your selection, press the **OSD** button.

2. OSD menu

2.1. Overview



Main menu:

```
MAIN MENU

DOME SETUP
CAMERA SET
AUTO SCAN
TOUR
PRAVACY
PATTERN
ALARM
SECTOR
EXIT
```

Use the up/down arrows to go the desired position. Use the left/right arrows to confirm your choice.

2.2. Dome: PTZ adjustments

```
DOME SET

CAMERA ID        : CAM1□□□□□□□□□□□□□
RECOVER          : OFF
MANUAL SPEED     : 100°/S
AUTO FLIP        : OFF
ZOOM SPEED       : FAST
ALARM            : DISABLE
LANGUAGE         : ENGLISH
[NEXT PAGE]
SAVE AND EXIT
EXIT
```

← **Default setting**

DOME-SETUP -> CAMERA ID:

You can enter up to 16 characters using the left/right arrows.

- To move from left to right to the next character, press **ZOOM +**.
- To move from right to left to the next character, press **ZOOM -**.

Blanks are marked with □.

DOME-SETUP -> RECOVER:
The camera is able to return to those previous settings which were used before you operated the camera manually (auto scan, group tour, preset, pattern or sectors).
After the set time, the camera goes into operation again in case it has been switched off. The recovery time can vary between 15 – 99 seconds. The default setting is OFF.

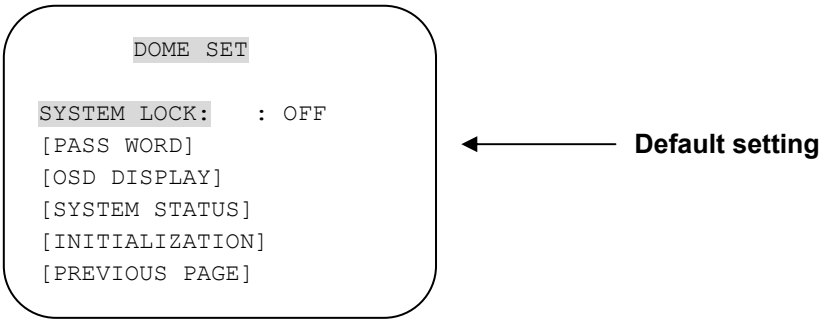
DOME-SETUP -> MANUAL SPEED:
The manual pan/tilt speed can be set from 10°/sec to 200°/sec. The default setting is 100°/sec.

DOME-SETUP -> AUTO FLIP
Use the left/right arrows to turn the auto flip function on/off. The default setting for auto flip is OFF

DOME-SETUP -> ZOOM SPEED:
Zoom speed can be set to FAST or SLOW. Use the left/right arrows to make the setting. The default setting is FAST.

DOME-SETUP -> ALARM:
The alarm function is activated by switching-on the ENABLE mode. Use the left/right arrows to make the setting. The default setting is DISABLE.

DOME-SETUP -> LANGUAGE:
English, Italian and Polish are available, plus some other languages. Use the left/right arrows to make the setting. The default setting is ENGLISH.



DOME-SETUP -> SYSTEM LOCK:
Saved data is stored is protected by a password. Changes are only possible using the correct password. Set the System Lock“ to ON to get to the password page. Use the left/right arrows to make the settings. The default setting is OFF.

DOME-SETUP -> PASSWORD:

Use the left/right arrows to enter the password on this page. The password has to contain numbers from 001 to 255. The default password is 99.

```
        ENTER PASSWORD

BY ENTERING PRESET CODE
PASSWORD ***
CONFIRM  ***
```

In the password field, enter a number from 001-255 using the PRESET button. Re-enter the number in the confirmation field. The monitor displays „CONFIRMED“. The menu page is then started automatically.

```
        ENTER PASSWORD

BY ENTERING PRESET CODE
PASSWORD ***
CONFIRM  ***CONFIRMED
```

<CONFIRMED>

```
        ENTER PASSWORD

BY ENTERING PRESET CODE
PASSWORD ***
CONFIRM  ***CANCELLED
```

<CANCELLED>

If a user enters a wrong PRESET number for PASSWORD or CONFIRM, the monitor displays "CANCELLED". If a user enters a wrong PRESET number three times, the previous monitor page is displayed.

NOTE: Once a password has been created, it has to be used to access the OSD main menu. This also applies to changes. The user has to know the password to make changes. The device is delivered without a saved password.

DOME-SETUP -> OSD DISPLAY:

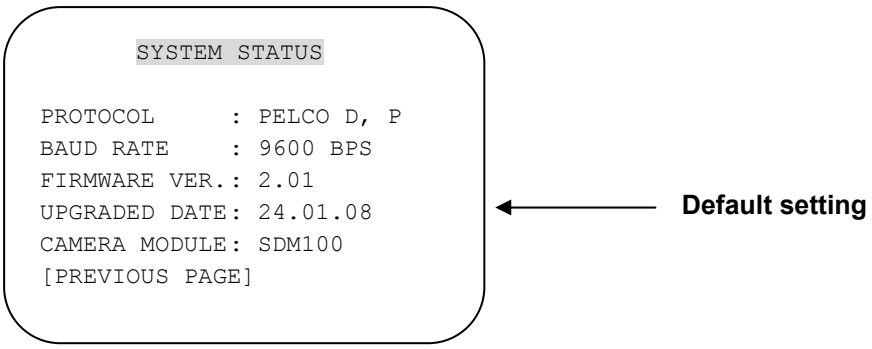
The OSD ID is displayed if set to ON and can be switched of with OFF. Use the left/right arrows to make the settings.

```
        OSD DISPLAY

CAMERA ID     : OFF
PRESET ID     : OFF
SECTOR ID     : OFF
COORDINATE    : ON
[PREVIOUS PAGE]
```

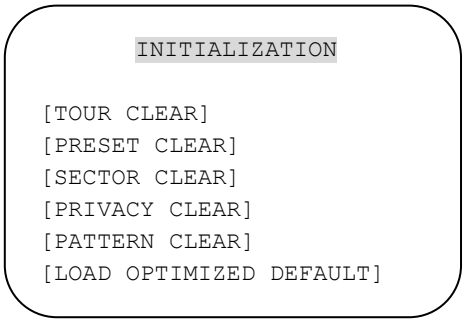
← **Default setting**

DOME-SETUP -> OSD DISPLAY:
Camera information is displayed.

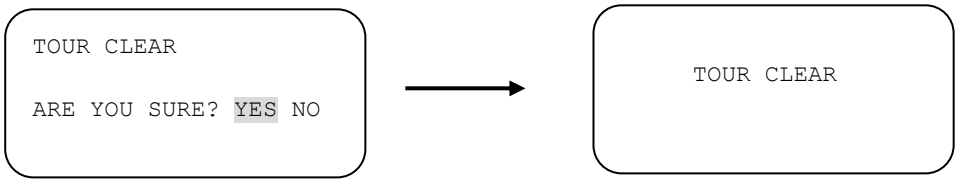


- Protocol and Baud rate are displayed according to the settings oft he DIP-switch
- Firmware version and data upgrade are applied when running updates

DOME-SETUP -> INITIALIZATION:
Using this function, all saved data of “tour“, “preset“, “sector“, “privacy“ or “pattern“ are deleted.

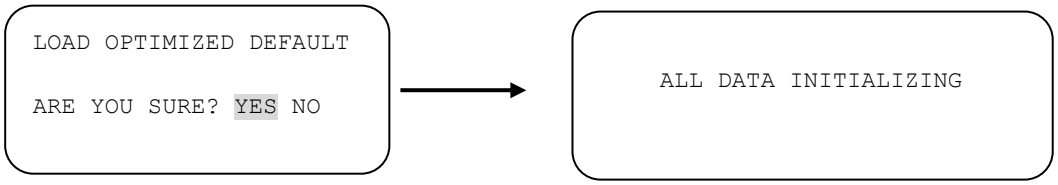


Use the left/right arrows to delete saved data.



If you press **FOCUS -** and the curser is set to YES, saved data is deleted. After that, every element such as “preset“, „sector“ etc blinks and appear for approx. 2-3 seconds on the screen. Then the screen displays the previous page.

In order to delete the saved data and to reset to default settings, select LOAD OPTIMIZED DEFAULT . The following page appears:

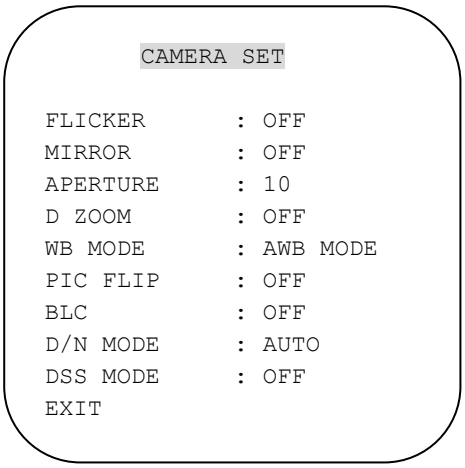


To delete the data, select YES and press **FOCUS -**. The screen displays„ALL DATA INITIALIZING“ for 5-7 seconds. The previous menu page is displayed automatically.

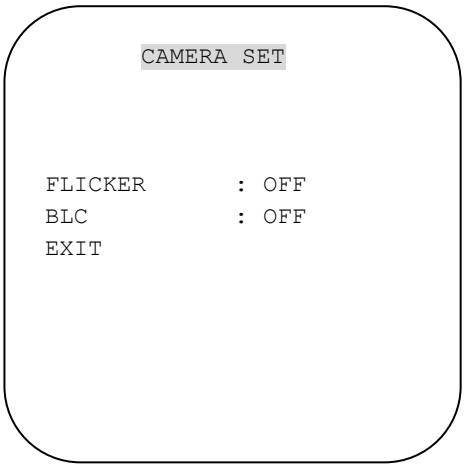
DOME-SETUP -> SAVE AND EXIT:
Data is saved and the page is exited.

DOME-SETUP -> EXIT:
The page is exited without saving any data.

2.3. Camera adjustments



<TS-PTZ10X>



<TS-PTZ3X>

CAMERA SET -> FLICKER:
This function reduces picture flickering. The default setting is OFF. Set the flicker mode to ON in case the power source doesn’t comply with the frequency.

CAMERA SET -> MIRROR:
This function can be used to display a horizontally mirrored picture. The default setting is OFF.

CAMERA SET -> APERTURE:
This function enables to show details and to emphasise picture borders. The granularity is increased. The default setting is 10 (the aperture can be set from 0-15).

CAMERA SET -> D ZOOM:
Switches on the 10x digital zoom.

CAMERA SET -> WB MODE:
The white balance function has 4 setting modes, depending on the outside light. The default setting is AWB MODE (automatic white balance).

Depending on the light conditions, the following settings are possible:
- AWB MODE: from 3200 °K to 6000°K
- INDOOR: up to 3200 °K
- OUTDOOR: up to 5800 °K
- ATW MODUS: from 2000 °K to 10000 °K

CAMERA SET -> PIC FLIP:
The picture can be vertically mirrored. The default setting is OFF.

CAMERA SET -> BLC:
The default setting for backlight compensation is OFF.
OFF – backlight compensation (BLC) is not active.
ON – backlight compensation (BLC) is active.

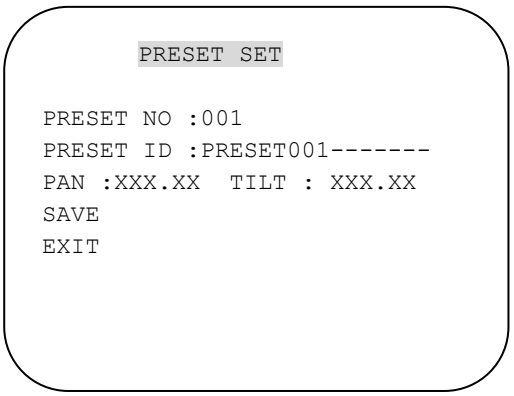
CAMERA SET -> D/N MODE:
The IR cut filter operates in the following modes:
- AUTO MODE: Automatic switching between colour mode and black/white mode
- NIGHT MODE: The camera always remains in black/white mode.
- DAY MODE: The camera always remains in colour mode.

The default setting is AUTO MODE.

CAMERA SET -> DSS MODE:
Digital slow filter. This function determines the shutter speed. The shutter speed is increased to accumulate the light longer. The values can be set to 2x, 4x, … , 128x. The default setting is OFF.

CAMERA SET -> EXIT:
Exit the menu.

2.4. Preset



← **Default setting**

PRESET -> PRESET NO:
There are 165 preset numbers available. Use the left/right arrows to select a preset number.

PRESET -> PRESET ID:
You can assign a name to a preset position, consisting of up to 16 characters. Use the left/right arrow to select the characters. To move from left to right, press **ZOOM +**. To move from right to left, press **ZOOM -** . Blanks are indicated with □.

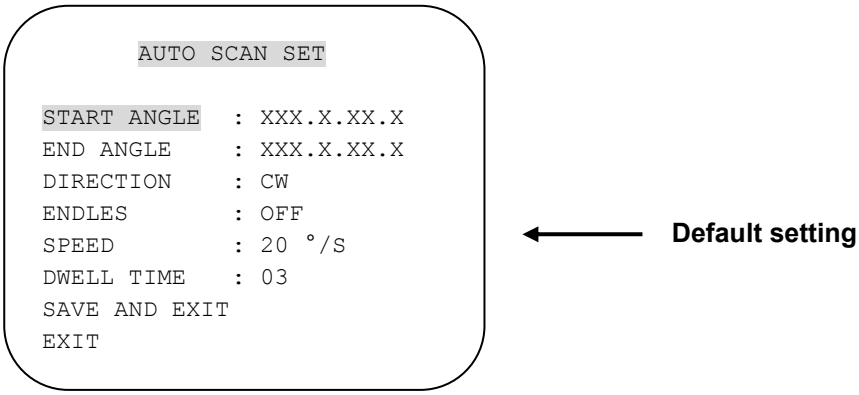
PRESET -> Pan XXX.X Tilt XX.X:
The coordinates of the preset position are displayed.

PRESET -> SAVE:
This function savest he preset position.

In order to set a preset position, please follow these steps:
- Exit the OSD menu of the camera module.
- Use the arrows and zoom button to move to the desired position.
- Once the position is selected, call-up the PRESET menu.
- Enter the desired preset number in the PRESET NO field.
- Select SAVE to store the settings. The curser is positioned at PRESET NO and the next preset number is displayed.

PRESET -> EXIT:
Exit the preset menu.

2.5. Auto scan



AUTO SCAN -> START ANGLE:
Press **FOCUS +** to select a start position. Move to the desired position by using the arrows. Confirm your choice with **FOCUS +**.

AUTO SCAN -> END ANGLE:
Press **FOCUS +** to select an end position. Move to the desired position by using the arrows. Confirm your choice with **FOCUS +**.

AUTO SCAN -> DIRECTION:
You can choose from 2 directions:
- CW: clockwise (default setting)
- CCW: counter-clockwise

AUTO SCAN SET -> ENDLESS:
The AUTO SCAN function can be used endlessly. Use the left/right arrows to make the settings. The default setting is OFF.

AUTO SCAN -> SPEED:
Speed settings ara available from 1°/sec to 35°/sec. The default setting is 20°/sec.

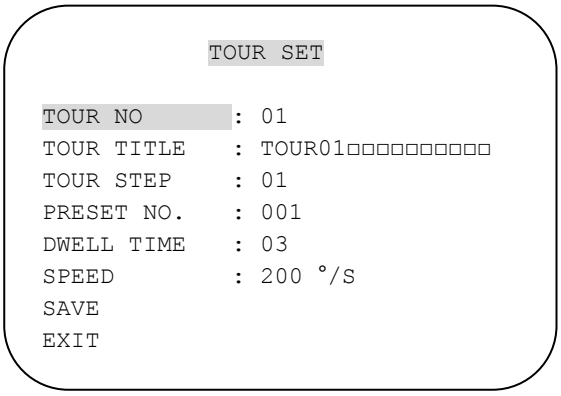
AUTO SCAN -> DWELL TIME:
Use the left/right arrows to set the dwell time. It can vary from 1-30 seconds. The default setting is 1 sec.

AUTO SCAN -> SAVE AND EXIT:
This function savest he settings and exits the auto scan menu.

AUTO SCAN -> EXIT:
Exit the menu.

2.6. Tour

There are 8 programmable tours available. Each tour can contain up to 60 preset positions.



← **Default setting**

TOUR -> TOUR NO:
There are 8 tour numbers available. Use the left/right arrows to select a tour number.

TOUR -> TOUR TITLE:
You can assign a name to a tour, consisting of up to 16 characters. Use the left/right arrow to select the characters. To move from left to right, press **ZOOM +**. To move from right to left, press **ZOOM -** . Blanks are indicated with □.

TOUR -> TOUR STEP:
Each tour can consist of up to 60 steps (preset positions). All presets can be run with different speeds and dwell times. Use the left/right arrows to select a tour step.

TOUR -> PRESET NO:
Assigns a preset number to the current step. Use the left/right arrows to select a preset number.

TOUR -> DWELL TIME:
A dwell time is assigned to the current step. The dwell time can be from 1-99 sec. The default setting is

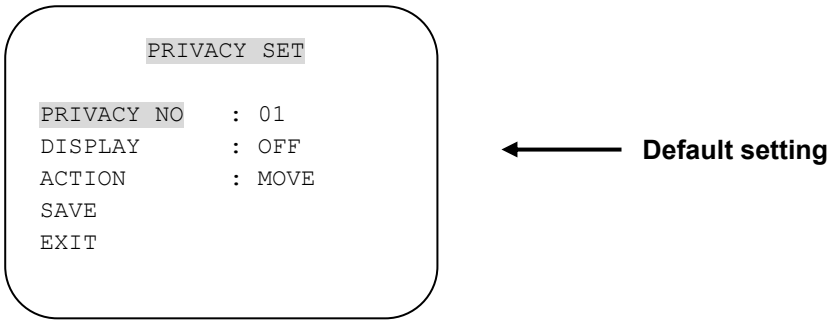
TOUR -> SPEED:
Defines the speed of the current step. The speed can be from 10°/sec to 200°/sec. The default setting is 200°/sec. Use the left/right arrows to select a value.

TOUR -> SAVE:
Saves the settings of the current tour step.

TOUR -> EXIT:
Exit the menu.

2.7. Privacy zones

The camera contains 4 privacy zones which can be used to hide certain areas.



PRIVACY -> PRIVACY NO:
There are 4 privacy zones available. Use the left/right arrows to select a zone number.

PRIVACY -> DISPLAY:
Use the left/right arrows to show the current privacy zone (ON). This area is displayed as a grey square. The default setting is OFF.

PRIVACY -> ACTION:
In order to set the position of a privacy zone, do the following:

- Use the left/right arrows to select MOVE.
- Press **FOCUS +.**
- Use the arrows to go to the desired position.
- Press **FOCUS +** to save the position.

In order to set the size of a privacy zone, do the following:

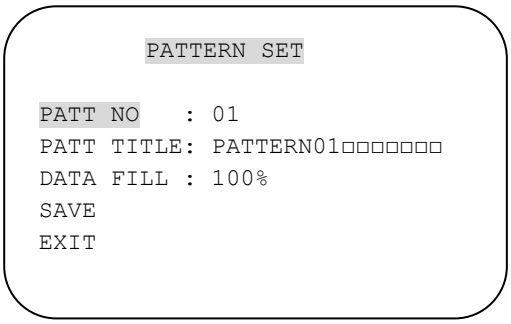
- Use the left/right arrows to select ADJUST.
- Press **FOCUS +.**
- Use the arrows to go to the desired position.
- Press **FOCUS +** to save the size.

PRIVACY -> SAVE:
Saves the settings of the current privacy zone.

PRIVACY -> EXIT:
Exit the menu.

2.8. Patterns

There are 8 programmable patterns available.



Default setting

PATTERN -> PATT NO:
There are 8 patterns available. Use the left/right arrows to select a pattern number.

PATTERN -> PATT TITLE:
You can assign a name to a pattern, consisting of up to 16 characters. Use the left/right arrow to select the characters. To move from left to right, press **ZOOM +**. To move from right to left, press **ZOOM -** . Blanks are indicated with □.

PATTERN -> DATA FILL:
Indicates whether the storage location which is reserved for the current pattern, is already fully used..
In order to set a pattern, do the following:

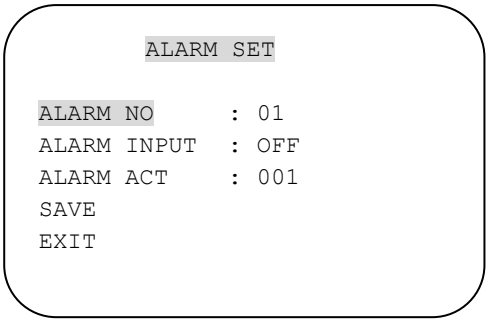
- Press **FOCUS +.**
- Use the arrows and the zoom button to go to the desired route.
- Press **FOCUS +** to save the route.

PATTERN -> SAVE:
Saves the settings of the current pattern.

PATTERN -> EXIT:
Exit the menu.

2.9. Alarm

The camera has 4 analogue alarm inputs which can be connected with presets, tours and patterns.



ALARM -> ALARM NO:
There are 4 alarm inputs available. Use the left/right arrows to select an alarm number.

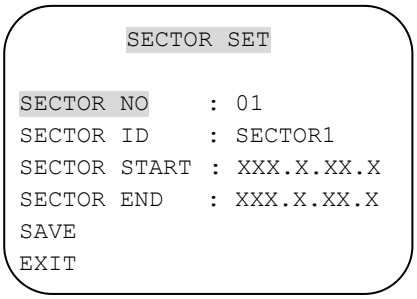
ALARM -> ALARM INPUT:
The alarm inputs can be set to NC (Normal Closed) or NO (Normal Open). The default setting is OFF. Use the left/right buttons to select a value.

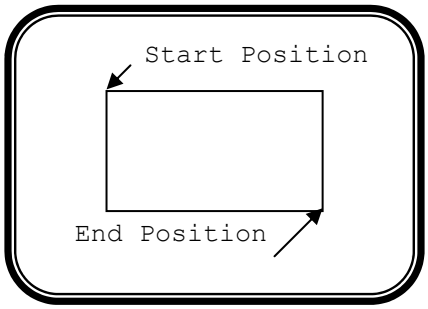
ALARM -> ALARM ACT:
If an alarm is triggered, one of 165 preset positions (001-165), one of 8 tours (T01-T08) or one of 8 patterns (P01-P08) can be started. Use the left/right arrows to seelct a value.

ALARM -> SAVE:
Saves the adjustments oft he current alarm input.

ALARM -> EXIT:
Exit the menu.

2.10. Sector





Default setting

SECTOR -> SECTOR NO:
There are 8 sectors available. Use the left/right arrows to select a sector number.

SECTOR -> SECTOR ID:
You can assign a name to a sector, consisting of up to 16 characters. Use the left/right arrow to select the characters. To move from left to right, press **ZOOM +**. To move from right to left, press **ZOOM -** . Blanks are indicated with □.

SECTOR -> SECTOR START:
Press **FOCUS +** to select a start position. Move to the desired position by using the arrows. Confirm your choice with **FOCUS +**.

SECTOR -> SECTOR END:
Press **FOCUS +** to select an end position. Move to the desired position by using the arrows. Confirm your choice with **FOCUS +**.

SECTOR -> SAVE:
Saves the settings of the current sector.

SECTOR -> EXIT:
Exit the menu

3. IP settings

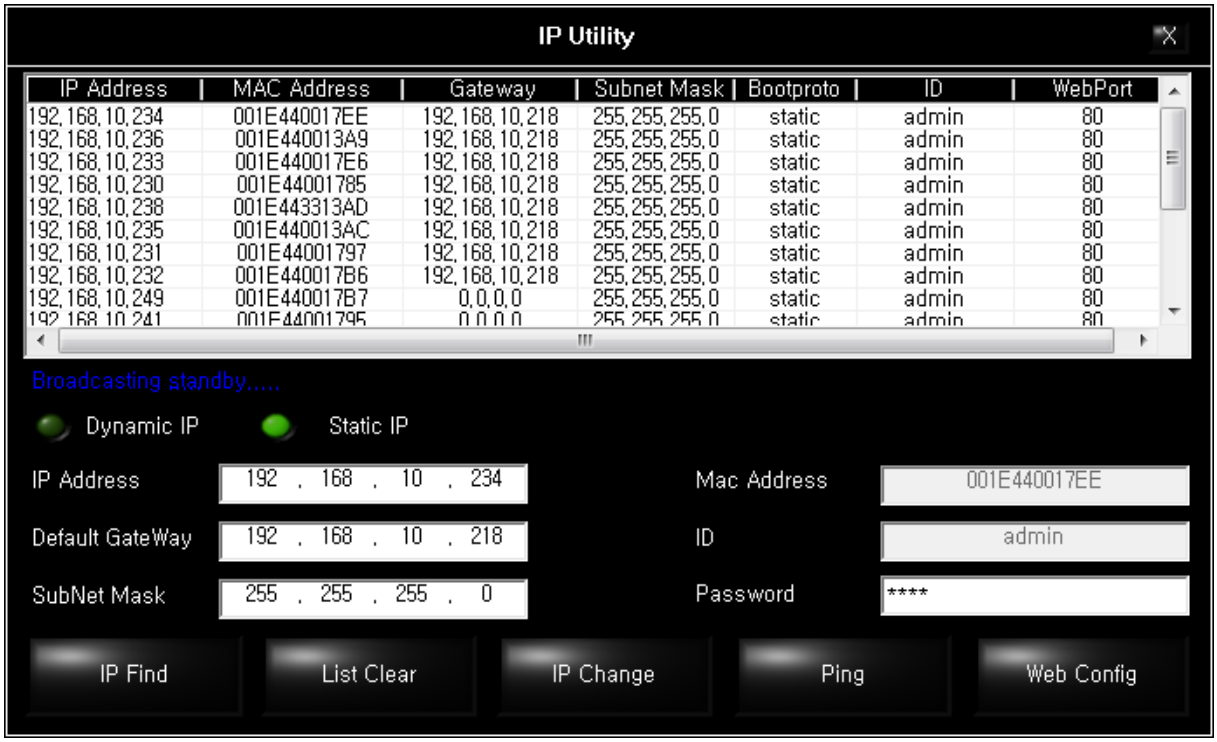
The SANTEC IP cameras come with the following default settings:

IP-address	:	192.168.1.168
Subnet mask	:	255.255.255.0
Gateway	:	0.0.0.0
DNS-server	:	0.0.0.0
User ID	:	admin
Password	:	9999

To retain the default settings, press the reset button.

There are the following 3 options to change the IP-address of the camera:

a. IP-finder software
Every SANTEC IP camera comes with the IP-finder software.



- Select the camera from the list by double-clicking.
- Change the IP settings to the new settings.
- Enter the user name (ID) and the password.
- Click on **IP Change**.

b. Camera web interface
You will find the description of the web interface in the following chapter.

c. SanView software

Every SANTEC IP camera comes with the SanView-Lite software. In order to change the network settings, open the device adjustment page via the context menu (also see brief instructions on SanView software).

You will find the respective control elements on the **network parameter** tab. To copy the parameters, click on **Apply**. Further details on how to add a camera to the SanView software can be found in the brief instructions on the SanView software).

Below are the default settings to login to the SanView software:

User ID: admin
Password: santec

4. Web interface

4.1. Calling-up the camera web interface

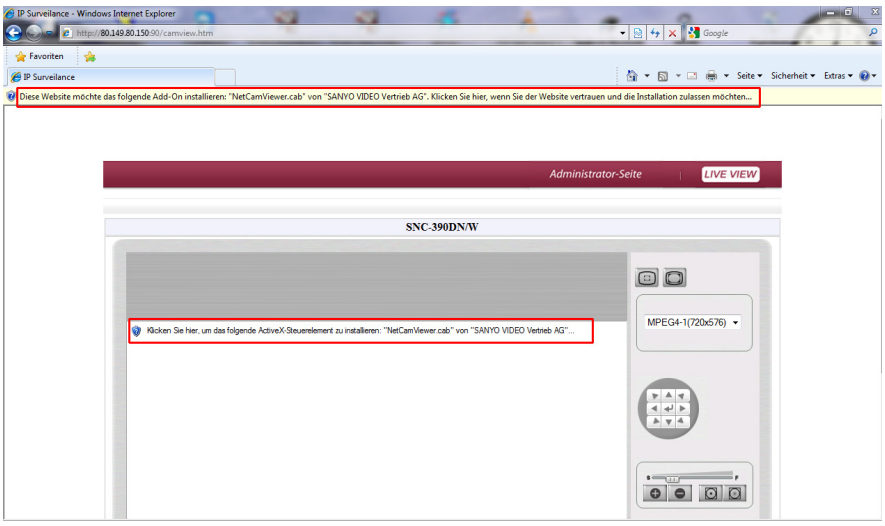
Open the Microsoft Internet Explorer and start the connection of the network camera as follows:

- Click on the URL field.
- Type in the URL address of the network camera and press the ENTER key. You will then access the web interface of the camera.
  The default IP-address of the camera is **192.168.1.168**

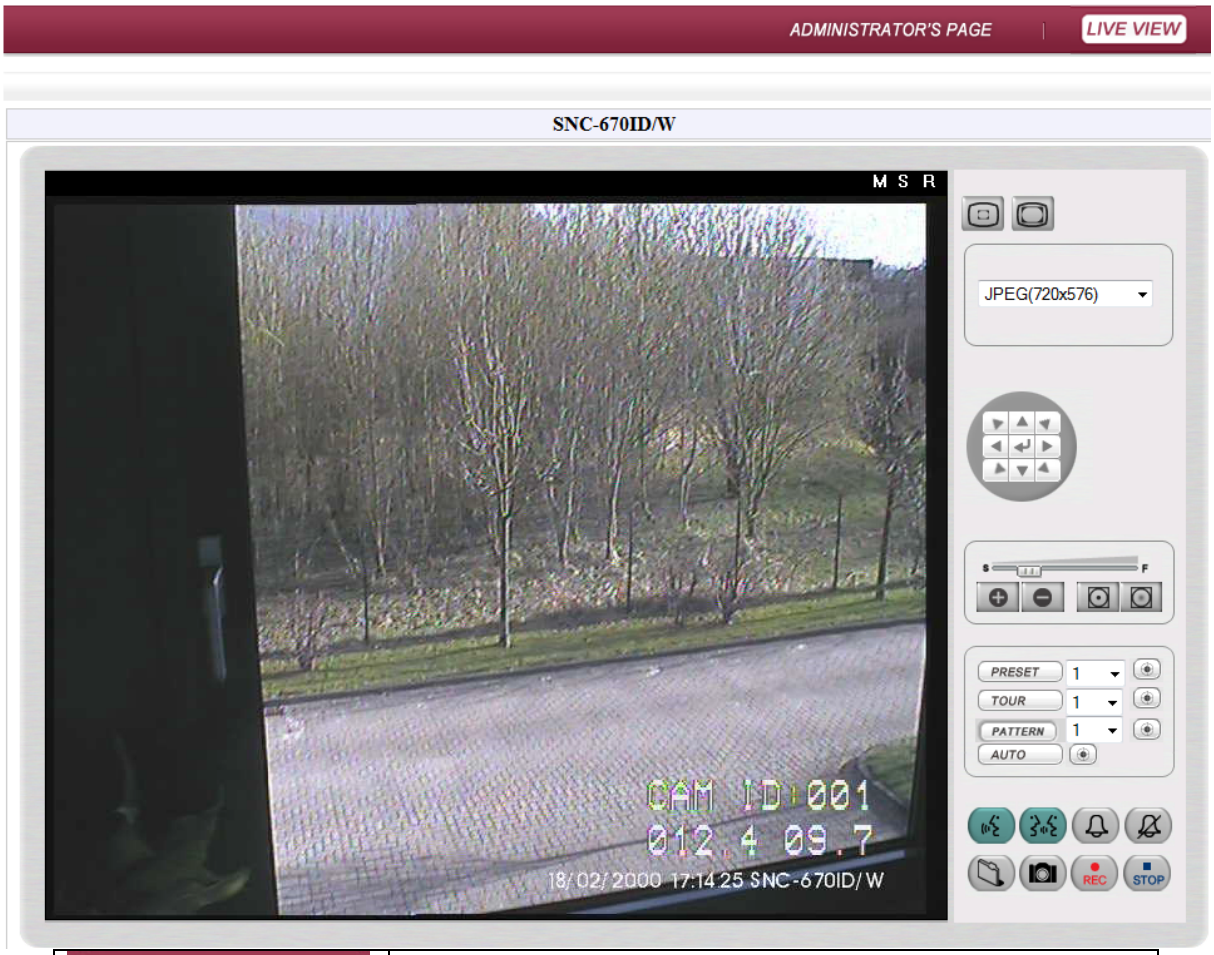
You need the user ID and the password in order to access the web interface.

The default user ID is ***admin*** and the default password is ***9999***.

Note:
When you call up the camera web interface, it may happen that you are prompted for an ActiveX installation. Please note that the Internet Browser settings allow the installation of ActiveX components.


IP Surveillance - Windows Internet Explorer
Diese Website möchte das folgende Add-On installieren: "NetCamViewer.cab" von "SANYO VIDEO Vertrieb AG". Klicken Sie hier, wenn Sie der Website vertrauen und die Installation zulassen möchten...
Administrator-Seite
LIVE VIEW
SNC-390DN/W
Klicken Sie hier, um das folgende ActiveX-Steuerelement zu installieren: "NetCamViewer.cab" von "SANYO VIDEO Vertrieb AG"...
MPEG4-1(720x576)

4.2. Live-View



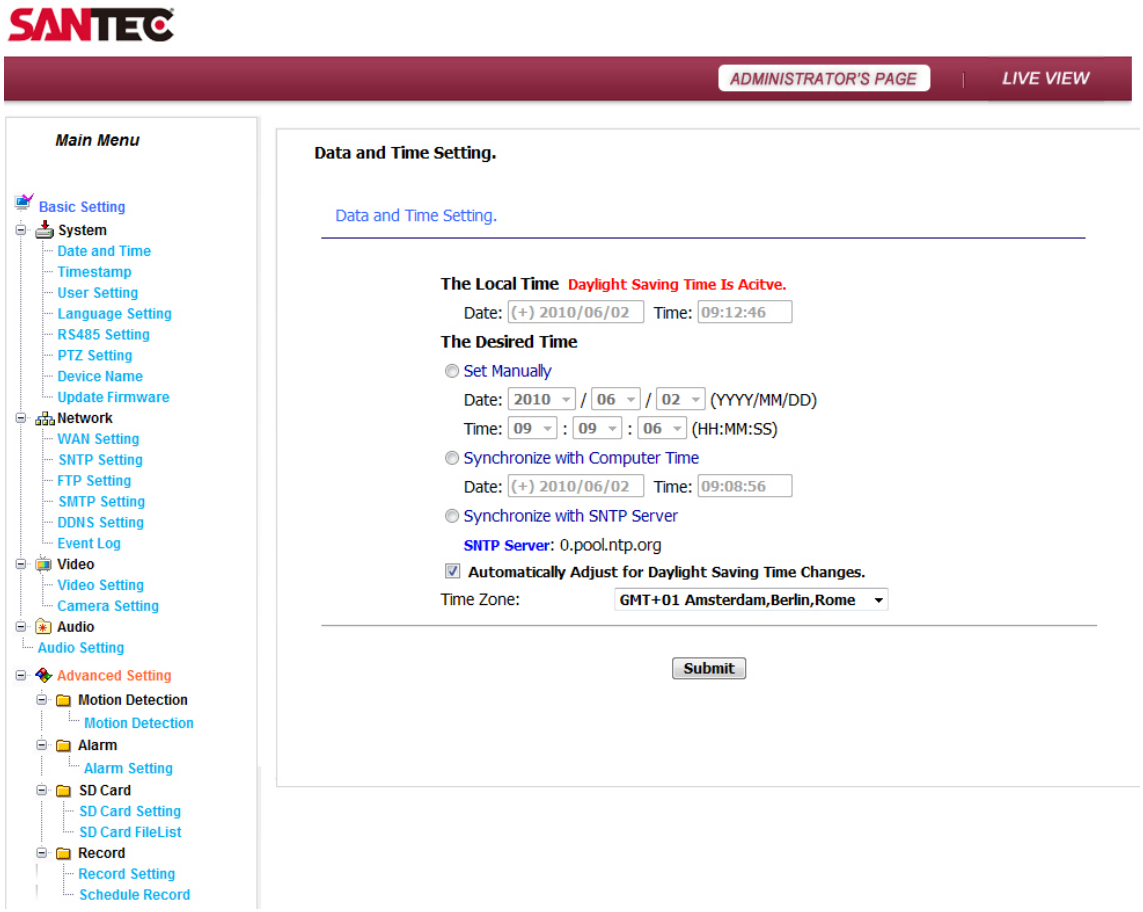
ADMINISTRATOR'S PAGE	Page for camera adjustments
LIVE VIEW	Page for Live-View
	Live-View with 50% resolution
	Live-View with defined resolution
	PTZ-control: • pan • tilt • confirmation/ OSD menu
S F	PTZ speed: S = slow, F = fast
	Zoom in
	Zoom out
	Focus close
	Focus far
PRESET 1	Select preset number
TOUR 1	Select and start tour number
PATTERN 1	Select and start pattern number

	Start autoscan
	Digital output (relay) on
	Digital output (relay) off
	Audio on (camera -> web interface)
	Audio off (camera -> web interface)
	Audio on (web interface -> camera)
	Audio off (web interface -> camera)
	Storage location for snapshots and video sequences
	Save snapshot
	Start recording (the video sequence is saved as AVI-file)
	Stop recording

Note:

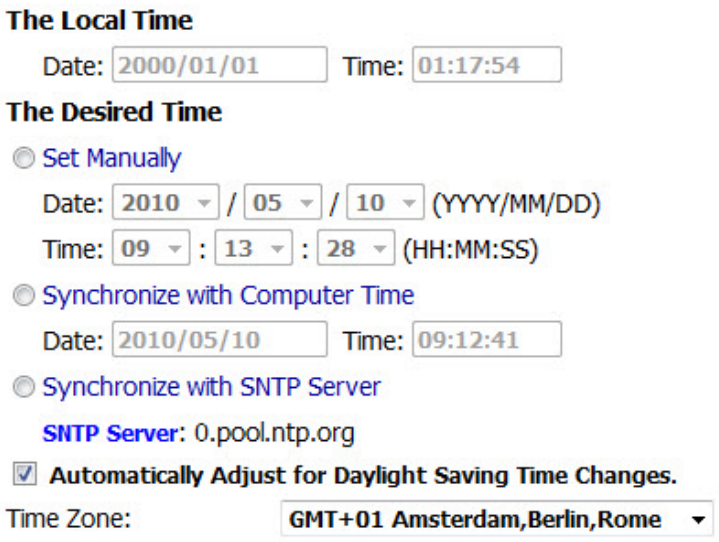
- In order to activate the 2-way audio function, press the and buttons.
- In order to save a snapshot or a video sequence, select the storage location by using the button.

4.3. Setting overview



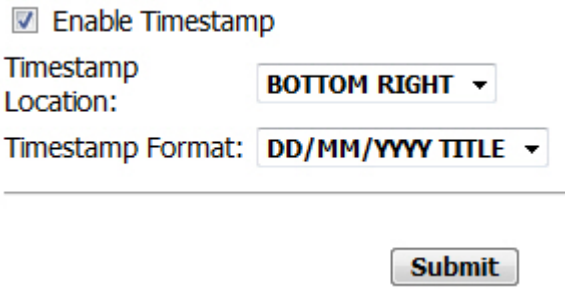
4.4. System settings

4.4.1. Time / date


The Local Time
Date: 2000/01/01 Time: 01:17:54
The Desired Time
Set Manually
Date: 2010 / 05 / 10 (YYYY/MM/DD)
Time: 09 : 13 : 28 (HH:MM:SS)
Synchronize with Computer Time
Date: 2010/05/10 Time: 09:12:41
Synchronize with SNTP Server
SNTP Server: 0.pool.ntp.org
Automatically Adjust for Daylight Saving Time Changes.
Time Zone: GMT+01 Amsterdam,Berlin,Rome
Submit

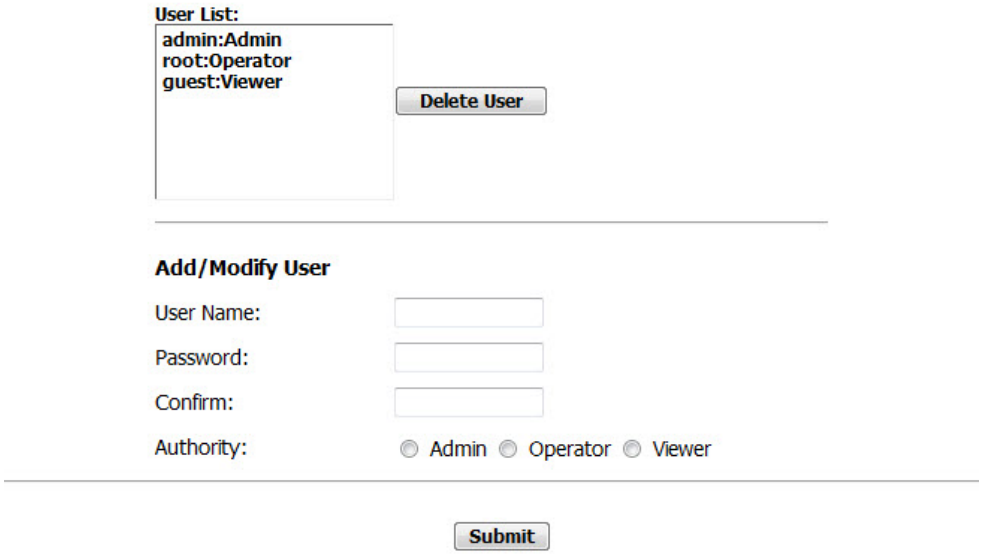
- **Local time:** The local time is the one as set in the camera.
- **Desired time:** You can change the time which is set in the camera as follows:
  - **Set manually:** Select the desired time and date from the drop-down list.
  - **Synchronize with computer time**: If you select this option, the computer time/date is transferred to the camera.
  - **Synchronize with SNTP server:** If you select this option, the SNTP server time/date is transferred to the camera.
- **Automatically adjust for daylight saving time changes:** This option activates the automatic adjustment to summer/winter time.
- **Time zone**: This is the time zone in which the camera is located. This option is important for daylight saving time changes.
- **Submit:** Click here to apply the new date/time settings to the network camera.

4.4.2. Time stamp



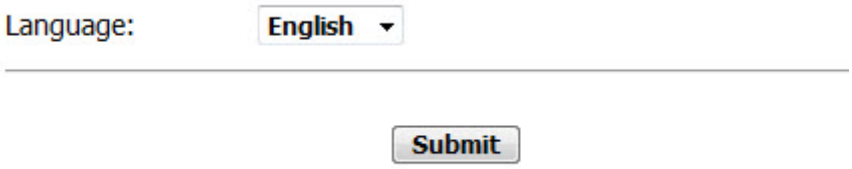
- **Enable time stamp:** The time stamp is displayed.
- **Time stamp position:**
  - UPPER LEFT
  - UPPER RIGHT
  - BOTTOM LEFT
  - BOTTOM RIGHT
- **Time stamp format:**
  - YY/MM/DD
  - MM/DD/YY
  - DD/MM/YY
  - YY/MM/DD TITLE
    (YY = year, DD = day, MM = month)
- **Submit:** Click here to apply the new time stamp settings to the network camera.

4.4.3. User



- **User list:** This list displays the user(s) and their respective authorisations.
- **Delete user:** Select a user from the list to be deleted and click this button.
- **User name:** Enter the user name here which is to be added or modified.
- **Password:** Password of the above user name.
- **Confirm:** Re-enter and thus confirm the password here.
- **Authority:** Authorisation level: admin, operator or viewer.
- **Submit:** Click here to apply the new user settings to the network camera.

4.4.4. Language



- **Language:** Select your language
  - English
  - German
- **Submit:** Click here to apply the new language settings to the network camera.

4.4.5. RS-485 settings

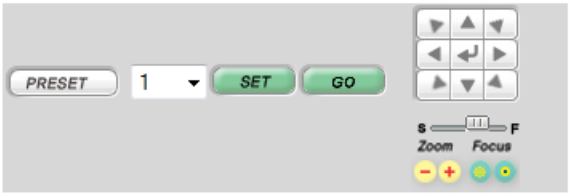
The RS-485 settings define the communication via the RS-485 interface between the camera IP module and the camera PTZ module.

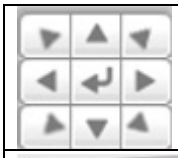
- **Baud rate:**
  - 2400
  - 4800
  - 9600
  - 19200
  - 38400
  - 57600
  - 115200
- **Type:** Type of command strings
  - 8-N-1
  - 8-E-1
  - 8-O-1
  - 7-N-1
  - 7-E-1
  - 7-O-1
- **ID:** ID of external device

- **Submit:** Click here to apply the new RS-485 settings to the network camera.

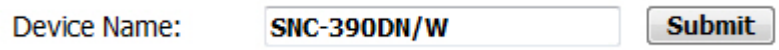
Note:
To ensure a trouble-free PTZ control of the camera, the RS-485 settings have to match the DIP-switch settings.

4.4.6. PTZ settings



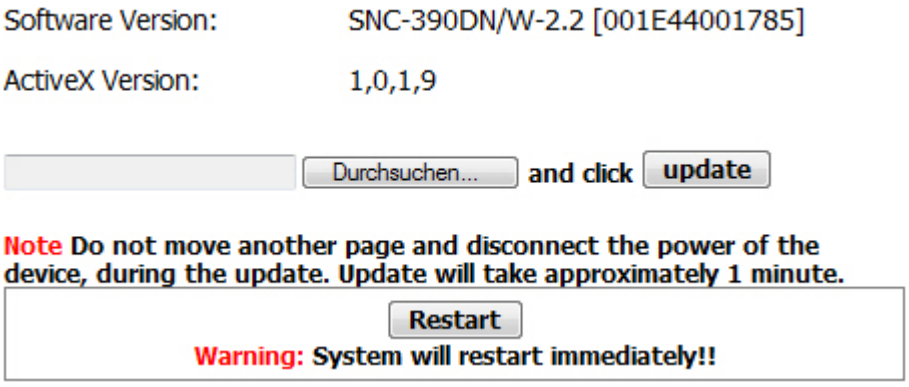
	PTZ-control: • pan • tilt
	PTZ speed: S = slow, F = fast
	Zoom in
	Zoom out
	Focus close
	Focus far
	Select preset number
	Save preset position
	Go to preset position

4.4.7. Camera name



- **Camera name:** Enter the name/title of the camera.
- **Submit:** Click here to apply the new camera name to the network camera.

4.4.8. Update firmware

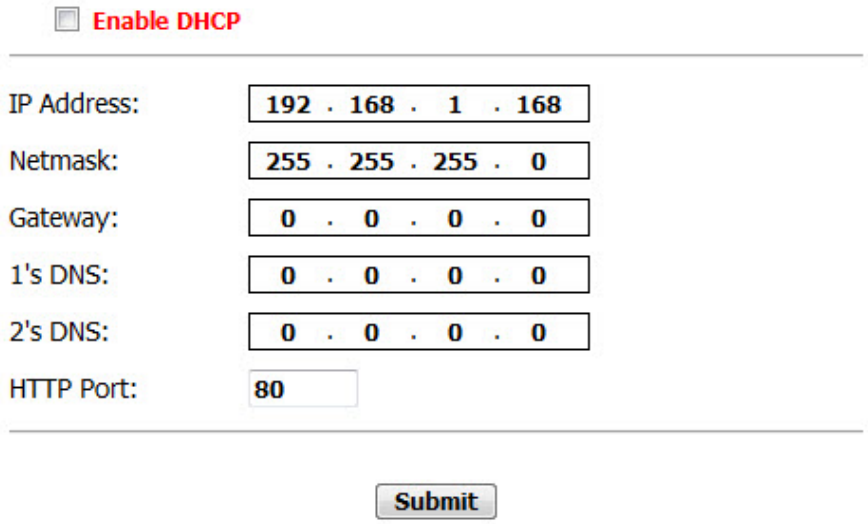


This page displays information on the installed firmware version and the ActiveX components.

- **Search:** Select the firmware file from your PC.
- **Update:** Start the update process.
- **Restart:** Restart the camera.

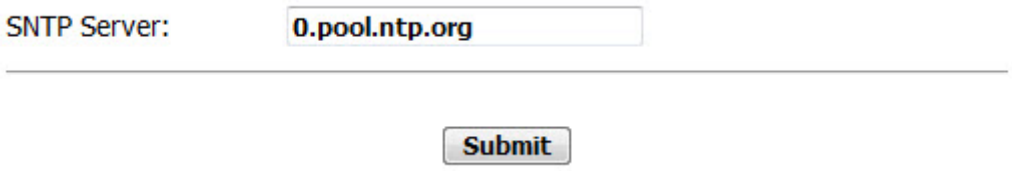
4.5 Network

4.5.1 IP-address



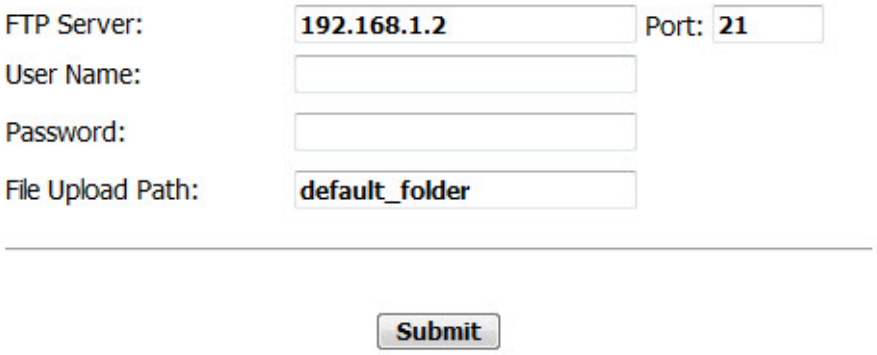
- **IP-address:** Enter the 4-Byte IP-address (value from 0 to 255). Every network camera has to have its own IP-address which can be identified in the network.
- **Netmask:** Enter the 4-Byte subnet-mask (value from 0 to 255). By this, the netmask can be identified in which the network camera is located.
- **Gateway:** Enter the 4-Byte gateway (value from 0 to 255).
- **First DNS:** Enter the 4-Byte DNS-server address (value from 0 to 255). The DNS-server transforms the domain name into an IP-address.
- **Second DNS:** Enter the 4-Byte DNS-server address (value from 0 to 255). The DNS-server transforms the domain name into an IP-address.
- **HTTP port:** Displays the specific HTTP port number. Default is 80.
- **Submit:** Click here to apply the new network settings to the network camera.

4.5.2. SNTP (time server for time synchronisation)



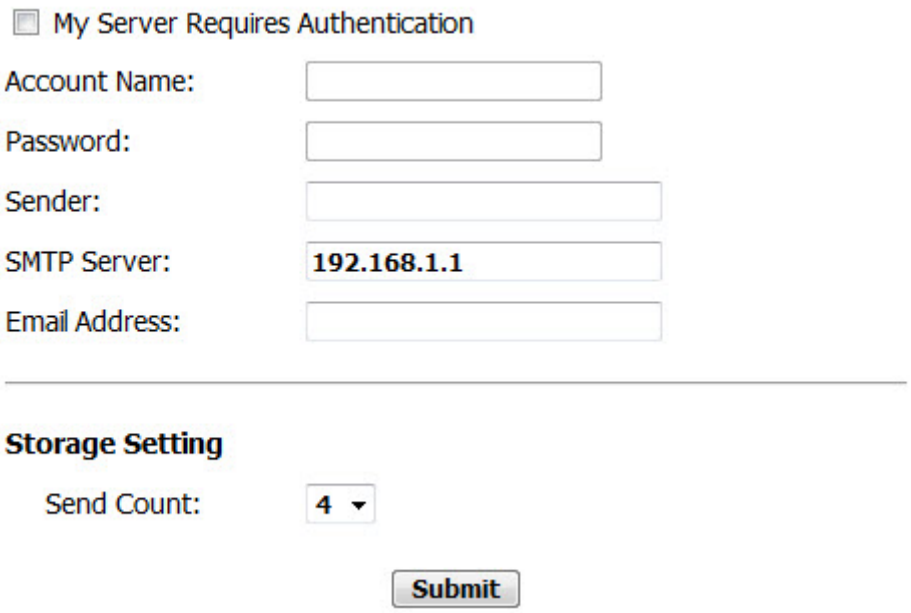
- **SNTP server:** IP-address of the SNTP server. Can be entered as 4-Byte IP-address or as domain name.
- **Submit:** Click here to apply the new network settings to the network camera.

4.5.3 FTP



- **FTP server:** IP-address of the FTP server. Can be entered as 4-Byte IP-address or as domain name.
- **Port:** Port number of the FTP server.
- **User name:** User name to login to the FTP server.
- **Password:** Password to login to the FTP server.
- **File upload path:** Folder path of FTP server in which the video data is to be stored.
- **Submit:** Click here to apply the new network settings to the network camera.

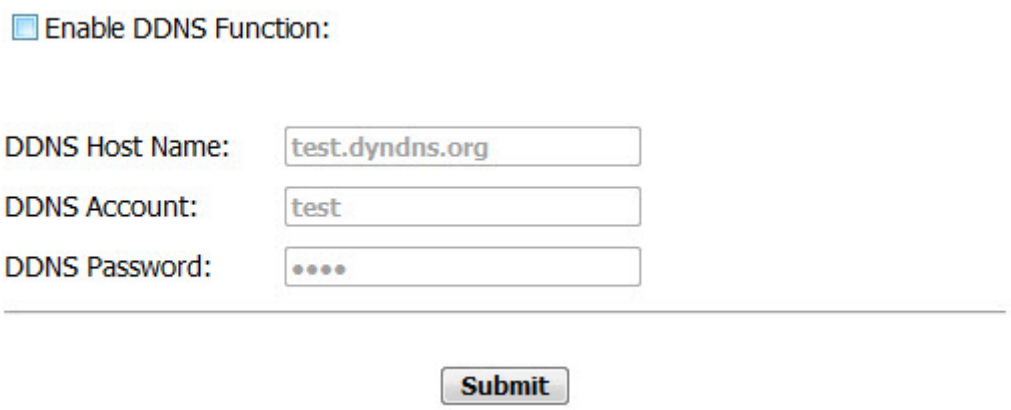
4.5.4. SMTP



If necessary, enable the option „My server requires authentication”.

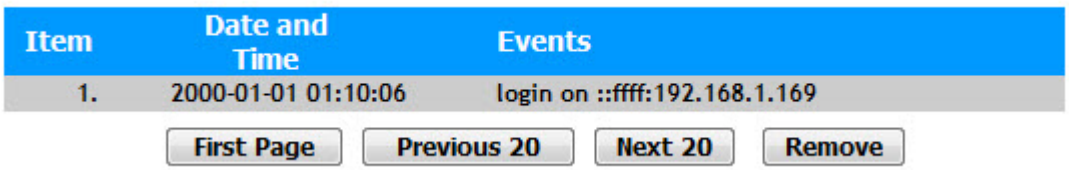
- **Account name:** Account on e-mail server.
- **Password:** Password of account on e-mail server.
- **Sender:** This information is displayed as e-mail sender.
- **SMTP server:** IP-address of SMTP server. Can be entered as 4-Byte IP-address or as domain name.
- **E-mail address:** E-Mail address to which the e-mails are to be sent.
- **Send count (1-8):** Number of files attached to an e-mail.
- **Submit:** Click here to apply the new network settings to the network camera.

4.5.5. DDNS (dynamic domain name system)



- **DDNS host name:** IP-address of DDNS server. Can be entered as 4-Byte IP-address or as domain name.
- **DDNS account:** Account on DDNS server.
- **DDNS password:** Password of account on e-mail server.
- **Submit:** Click here to apply the new network settings to the network camera.

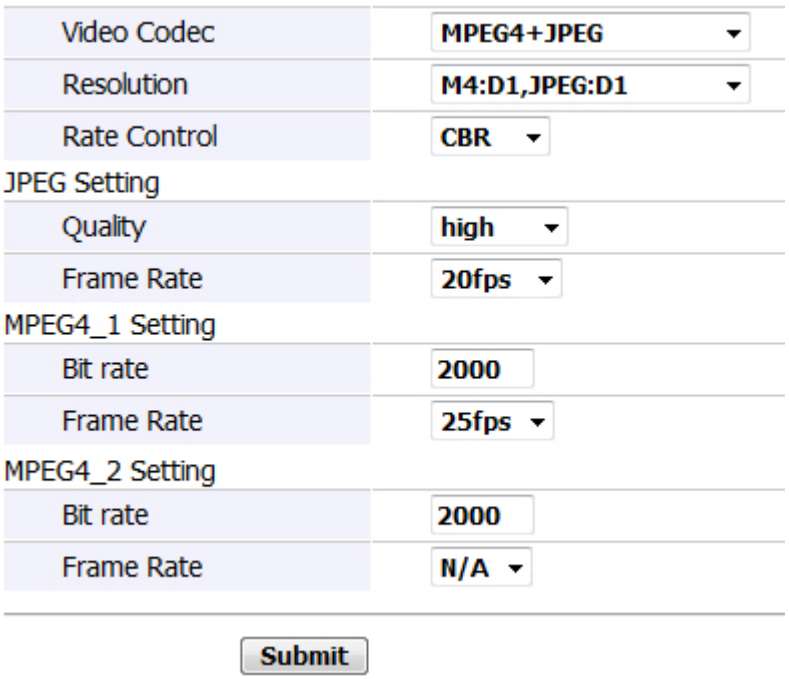
4.5.6. Event protocol



On this page, the events are displayed. You can browse in the events by clicking on the buttons “first page”, previous 20” and “next 20”.

4.6 Video settings

4.6.1 Encoding



- Compression: Setting of the video streaming mode
  - Single MPEG4
  - MPEG4 Half D1
  - MPEG4 + MPEG4
  - MPEG4 + JPEG: Pre-set mode. This mode is used in the SanView software.

- Resolution: The resolution of each video stream depends on the compression. The following values apply:

Compression	Resolution
Single MPEG4	Video Stream 1 – MPEG4: D1 (720x576)
MPEG4 Half D1	Video Stream 1 – MPEG4: D1 (720x288)
MPEG4 + MPEG4	Video Stream 1 – MPEG4: D1 (720x576) Video Stream 2 – MPEG4: CIF (352x288)
MPEG4 + JPEG	Video Stream 1 – MPEG4: D1 (720x576) Video Stream 2 – JPEG: D1 (720x576)

- Bit rate: Bit rate mode
  - CBR: Constant bit rate
  - CVBR: Variable bit rate

- JPEG settings
  - Quality: HIGH / NORMAL / LOW
  - Frame rate: 20 / 15 / 7.5 / 3 / 1 fps

- MPEG4_1 setting
  - Bit rate: 200 - 4000 Kbit/sec
  - Bild rate: 25 / 13 / 6 / 3 fps

- MPEG4_2 setting
  - Bitrate: 200 - 4000 Kbit/sec
  - Bildrate: 25 / 13 / 6 / 3 fps

- **Submit:** Click here to save the new settings.

4.6.2 Camera settings

Brightness	< 96 > (0~255)
Contrast	< 120 > (0~255)
Saturation	< 128 > (0~255)

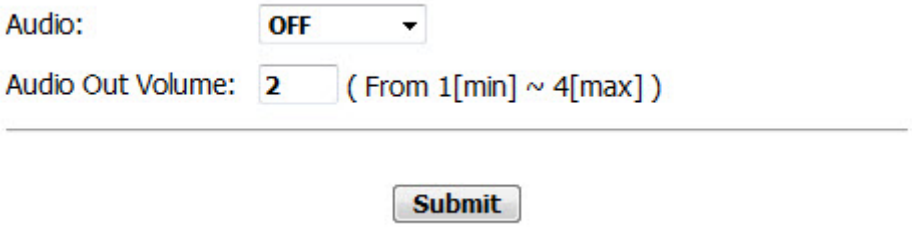
default Submit

- On this page, you can change the following picture settings:
  - brightness: 0 - 255
  - contrast: 0 - 255
  - saturation: 0 - 255

- **Reset**: The picture settings are reset to: brightness: 96; contrast: 120; saturation: 128.

- **Submit:** Click here to save the new picture settings.

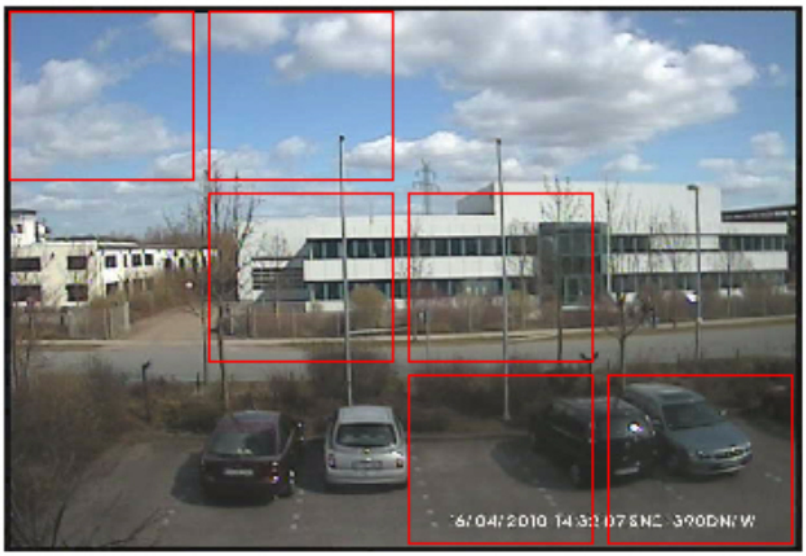
4.7. Audio settings



- **Audio:** Set the audio mode to:
  - OFF: audio is turned off
  - one-way: audio only from camera to PC
  - two-way: audio in both directions
- **Audio out volume:** 0 - 4
- **Submit:** Click here to save the new audio settings.

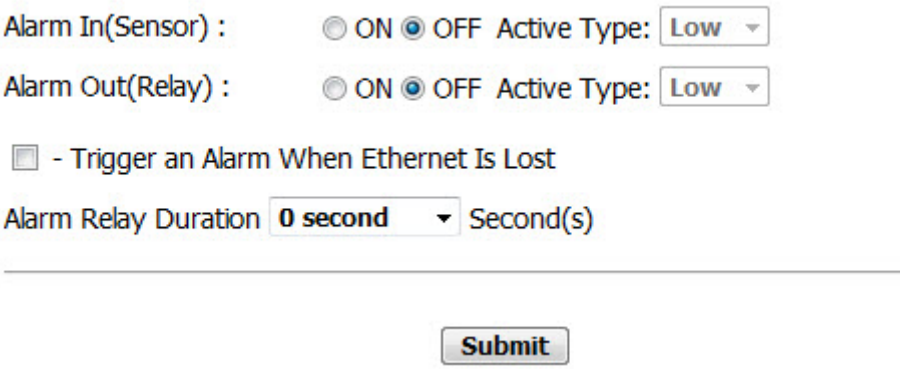
4.8. Extended settings

4.8.1. Motion detection



- **Motion detection:** Activation/deactivation of motion detection
- **Sensitivity:** Set the sensitivity level of the motion detection
  - Lowest
  - Low
  - Medium
  - High
  - Highest
- **CCD reference:** CCD reference (20 - 50)
- **Motion detection mask:** Click on the picture to set or to delete an element of the motion detection mask. If a motion occurs in the marked field, it will be detected.
- **Submit:** Click here to save the new motion detection settings.

4.8.2. Alarm settings


Alarm In(Sensor) :
ON OFF Active Type: Low
Alarm Out(Relay) :
ON OFF Active Type: Low
- Trigger an Alarm When Ethernet Is Lost
Alarm Relay Duration 0 second Second(s)
Submit

- **Alarm in (sensor):** Activate/deactivate the alarm input
  - Active type “low”: This means 0 V. The camera will trigger an alarm if the alarm input has 0 V. To achieve 0 V at the alarm input, the contacts are closed.
  - Active type „high“: This means 3.3 V. The camera will trigger an alarm if the alarm input has 3.3 V. To achieve 3.3 V at the alarm input, the contacts are not closed.

- **Alarm out (relay):** Activate/deactivate the alarm output
  - Active type „low“: This means 0 V. If the camera triggers an alarm, the alarm output has 0 V.
  - Active type „High“: This means 3.3 V. If the camera triggers an alarm, the alarm output has 3.3 V.
  -

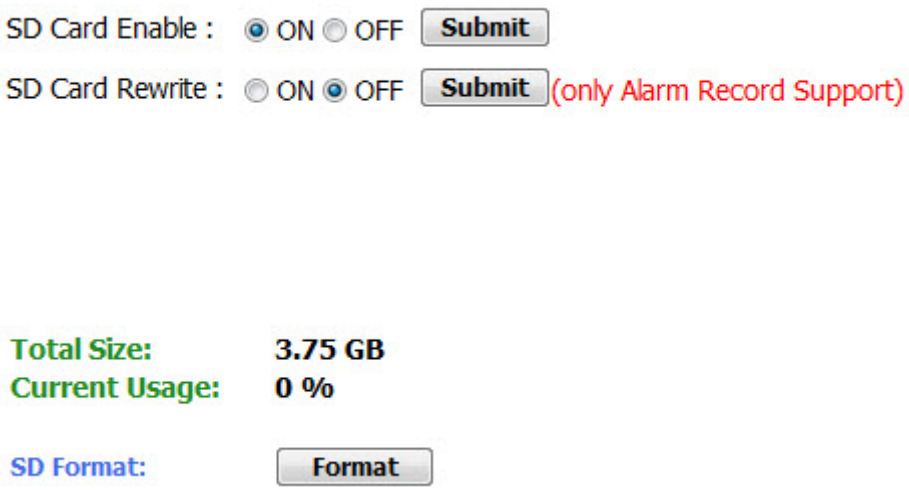
- **Trigger an alarm when Ethernet is lost:** The camera can trigger an alarm if the network connection is interrupted.

- **Alarm relay duration:** You can set how long the alarm output should be active since the alarm is not being triggered anymore.
  - 0 second: The alarm output is set to inactivity immediately after the alarm.
  - 10 seconds: The alarm output is set to inactivity 10 seconds after the alarm.
  - 30 seconds: The alarm output is set to inactivity 30 seconds after the alarm.
  - 1 minute: The alarm output is set to inactivity 1 minute after the alarm.
  - Endless: The alarm output remains active until the alarm output is manually set to inactivity (press button on the “live view” page of the web interface).

- **Submit:** Click here to save the new alarm settings.

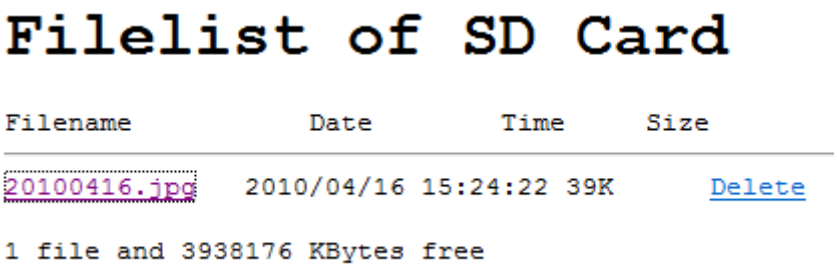
4.8.3. SD-card

4.8.3.1 SD-card settings


SD Card Enable : ON OFF Submit
SD Card Rewrite : ON OFF Submit (only Alarm Record Support)
Total Size: 3.75 GB
Current Usage: 0 %
SD Format: Format

- **SD-card enable:** Activate/deactivate the SD-card.
- **SD-card rewrite:** Activate/deactivate the rewriting of the SD-card.
- **Format:** The SD-card is being formatted.
- **Submit:** Click here to save the new SD-card settings.

4.8.3.2 SD-card content



- This page displays the content of the SD-card.
- Click on the respective file name to open it.
- Click on „Delete“ to delete the file.

4.8.4. Recording

4.8.4.1 Recording settings

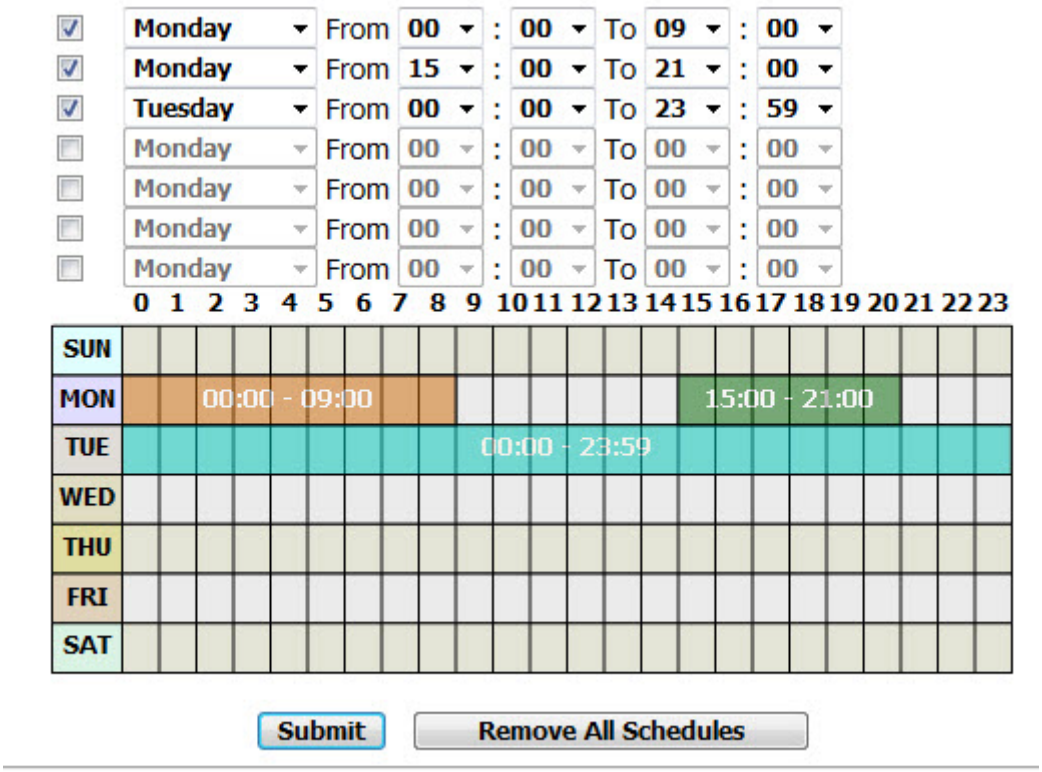
Schedule Record - Upload Via FTP
Schedule Record - Save Into SD Card
Alarm Record - Upload Via FTP
Alarm Record - Save Into SD Card
Alarm Record - Upload Via SMTP(jpeg only)
PreAlarm
Buffer: 0 Second(s)
SD File Format: AVI
FTP File Format: AVI
Submit

- On this page you can set the recording modes:
  - Schedule record – upload via FTP
  - Schedule record – save into SD-card
  - Alarm record – upload via FTP
  - Alarm record – save into SD-card
  - Alarm record – upload via SMTP (e-mail sending)

- **Additional setting options:**
  - Buffer: Pre-alarm buffer can be set to: 0 / 1 / 2 / 3 seconds.
  - SD file format can be set to: AVI / JPEG
  - FTP file format can be set to: AVI / JPEG

- **Submit:** Click here to save the new recording settings.

4.8.4.2 Recording schedules


Monday From 00 : 00 To 09 : 00
Monday From 15 : 00 To 21 : 00
Tuesday From 00 : 00 To 23 : 59
Monday From 00 : 00 To 00 : 00
Monday From 00 : 00 To 00 : 00
Monday From 00 : 00 To 00 : 00
Monday From 00 : 00 To 00 : 00
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23
SUN
MON
TUE
WED
THU
FRI
SAT
00:00 - 09:00
15:00 - 21:00
00:00 - 23:59
Submit
Remove All Schedules

- You can set up to 7 schedules in the camera.
- **Submit:** Click here to save the new schedule settings.
- **Remove all schedules:** All existing schedules are deleted.

5. Technical specifications

Camera	**SNC-670ID/W**
Camera type	Day/night IP PTZ camera
Housing	Weather-proof, IP-66
Sensor	1/4" Sony Super HAD CCD 540 TVL
Day/night adjustment mode	Auto, colour, black/white
IR cut filter	Mechanic, automatically operated
Lens	Motor zoom, 3.8-38.0 mm, DC-controlled
min. illumination	0.7 / 0.02 lux
Camera setting	OSD menu
OSD configuration	Also via network
Pan angle	Endless 360°
Pan speed	10-240°/sec.
Tilt anlge	90°
Tilt speed	10-240°/sec
Number of reset positionen	164
Number of tours	8
Number of atterns	8
Number of autoscans	1
Resolution	D1 (720x576) / half D1 (720x288) / CIF (352x288)
Compression	MJPEG/MPEG4
Video streaming	Single MPEG4 D1 max. 25 fps Single MPEG4 half D1 max. 25 fps Dual MPEG4 D1 max. 20 fps / MPEG4 CIF max. 20 fps Dual MPEG4 D1 max. 25 fps / MJPEG D1 max. 20 fps
Motion detection	Yes
Schedule	Yes
Picture upload	FTP/e-mail/HTTP
SD card	Yes (optional)
Alarm input/output	Digital 1x/1x
	Analog 4x/0x
Audio input/output	1x/1x, 3.5 mm jack plug
Interface	RS-485
Ethernet	100 Mbit, RJ-45, 10 Base-T/100 Base-TX
Voltage	12.0 V DC
Power consumption	max. 11.5 watt
Dimensions (DxH)	167 x 167 mm
Weight	1600 g
Operating temperature	-10°C to +50°C
Relative humidity	Max. 80%
Items included in delivery	SanView-Lite sofware

Subject to technical changes without prior notice. Errors excepted.

NOTES:

Your local distributor:

SANTEC
VIDEO TECHNOLOGIES